Operating Instructions

Spaltfix S-350

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English

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Please be sure to fill this in before starting. Then you can be sure that this document relates to your machine, so if you have any queries you will be given the correct information.

Machine number:.....

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1 Foreword

Thank you for buying our product.

This machine has been built in conformity with applicable European standards and regulations.

These operating instructions explain how to operate the machine safely and efficiently and how to maintain it.

Any person entrusted with the transport, installation, commissioning, operation or maintenance of the machine must have read and understood:

- the operating instructions
- the safety instructions
- the safety information given in the individual chapters.

To avoid operator error and ensure problem-free operation, the operating instructions must be available to the operating personnel at all times.

1.1 Copyright notice

All documents are protected by the law of copyright.

Documents including excerpts thereof may not be distributed or reproduced nor may their content be communicated without express permission.

1.2 Liability for defects

Read these operating instructions through carefully before putting the machine into operation.

We accept no liability for damage or disruptions caused by failure to observe the operating instructions.

Claims for liability must be reported as soon as the defect is identified.

Claims are null and void for example in the following cases:

- improper use
- faulty attachments and drives not supplied with the machine
- failure to use original spare parts and accessories
- conversions or modifications, where not agreed with us in writing

We are not liable for defects of wearing parts.

1.3 Reservations

Technical data, dimensions, illustrations of the machine and safety standards are subject to continual change and are therefore not in any circumstances binding in relation to the supplied machine.

We accept no liability for printing and typesetting errors.

1.4 Definitions

Operator

The operator is the party which operates the machine and uses it for its intended purpose or causes it to be operated by suitable, trained personnel.

Operating personnel

The operating personnel (operators) are those entrusted by the operator to operate the machine.

Technical personnel

Technical personnel are persons entrusted by the operator of the machine with special tasks such as installation, set-up, maintenance and troubleshooting.

Electrician

An electrician is a person who, by virtue of his specialist training, has knowledge of electrical systems, standards and regulations and is able to identify and prevent possible hazards.

Machine

The term machine replaces the commercial designation of the object to which these operating instructions relate (see cover sheet).

1.5 Operating instructions

This manual is a "translation of the original operating manual"

2 Safety information

2.1 Explanation of symbols

The following symbols and instructions in this manual provide warnings about possible personal injury or property damage or give useful information about working with the machine.

DANGER

Warning about danger zones

Instruction regarding safe working, where non-compliance entails the risk of serious or fatal injury.

Always observe these instructions and ensure that you work with particular caution and care.

DANGER

Warning of dangerous electrical voltage

Contact with live parts can result in immediate death.

Protective covers and enclosures marked with this sign may only be opened by qualified electricians after the electricity supply has been turned off.

DANGER

Crushing hazard

Risk of injury through upper limbs getting trapped.

DANGER

Danger of cut injuries

Risk of injury from cuts to limbs.

NOTICE

Instruction

Symbol for proper use of the machine.

Non-observance can result in malfunctions by or damage to the machine.

Noise

Symbol for an area where noise levels can exceed 85 dB(A).

Non-observance can cause hearing problems or deafness.

Further information

Symbol for further information relating to a bought-in part.

Information

Action-related information.

2.2 General safety information

The machine may only be operated by persons who are familiar with the machine's operation and hazards and with the user manual.

- It is the operator's responsibility to provide appropriate staff training.

Persons under the influence of alcohol, drugs or pharmaceutical products that impair responsiveness must not operate or maintain the machine.

The machine may only be operated if it is in perfect working condition.

Only operate the machine if it is in a stable position.

Minimum age of operative: 18 years.

Only one person may operate the machine at a time.

Take regular breaks to ensure concentration.

Ensure that your workplace is adequately illuminated since poor lighting can significantly increase the risk of injury.

Never work without the protective guards in place.

Only carry out repair, setup, maintenance and cleaning work when the drive is switched off and the tool is stationary.

- If the machine has a PTO drive, the universal joint shaft must be removed from the tractor.
- If the machine is driven by an electric motor, set main switch to 0 and disconnect the power cable.

Never leave the machine running unattended.

Switch off the machine's drive unit before carrying out any adjustments.

Only use original - POSCH - spare parts.

Do not modify or tamper with the machine.

Work on electrical equipment must only be carried out by qualified electricians.

Never use damaged cables.

Machines with electric motors must not be used in the rain as this can lead to a malfunction of the switch or the motor.

2.3 Safety information for saws

Do not hold the log in your hand while sawing.

Do not remove offcuts or other parts of the workpiece from the cutting area while the machine is running.

Never reach towards the rotating saw blade with gloves.

Only use the machine outdoors.

- Should the machine be used indoors, however, a local extractor unit (extraction at source) is required.

The machine must always be properly maintained and must be kept free of waste material such as chips and sawn-off pieces of wood.

Wear safety shoes and close-fitting clothes when working with this device.

Wear goggles or a face mask while working.

Use respiratory protection to reduce the risk of inhaling harmful dust.

Only use saw blades that are designed to reduce noise.

Do not use damaged or deformed saw blades!

Minimum saw blade diameter	Maximum saw blade diameter	Bore
890 mm	900 mm	40 mm

Only saw blades conforming to the EN 847-1 standard may be used.

When turning off the machine, always be careful of the tool runout until the machine has come to a standstill.

The working pressure of the hydraulic system must not exceed 230 bar.

2.4 Safety instructions for conveyor belts

Persons must keep clear of the danger zone.

It must be expected that material will be ejected at high speed to any position within this area.

Never reach into the hopper or touch the conveyor belt when the machine is running.

Shut the drive down before removing any jammed pieces of wood.

Only use the machine outdoors.

Wear safety shoes and close-fitting clothes when working with this device.

Wear protective gloves.

The working pressure of the hydraulic system must not exceed 230 bar.

2.5 Noise

The workplace-related, A-rated emission sound pressure level is

- 87 dB(A) when idling or
- 94 dB(A) when sawing,

measured at the operative's ear.

In the case of machines with a PTO drive, the noise level depends on the noise of the tractor.

Ear protection is therefore necessary.

The stated values are emissions values, and thus do not necessarily represent reliable values for the work area. Although there is a correlation between emission and pollutant levels, it is not possible to deduce reliably from that whether or not additional precautionary measures are necessary. Factors that influence the level of pollutants present in the work area include the individual nature of the work area, other sources of noise, e.g. the number of machines and other work operations being carried out in the vicinity. Equally, permissible values for a work area may vary between different countries. However, this information should enable the user to estimate the dangers and risks more accurately.

2.6 Remaining risks

Even if all safety precautions are observed and the machine is used in accordance with the instructions, some risks still remain:

- Touching of revolving parts or tools.
- Injury caused by flying logs or log pieces.
- Risk of burns if the engine is not properly ventilated.

- Hearing loss if ear protection is not worn when working.
- Human error (e.g. due to excessive physical exertion, mental strain, etc.)

With every machine, some risks still remain. Therefore you should always be very careful when working. It is up to the operating personnel to ensure that work is carried out safely.

2.7 Proper use

The Spaltfix S-350 is a cutting and splitting machine for logs with a diameter of 7 - 35 cm. It splits logs with a splitting force of 12 t into 2, 4, 6 or 8 sections. The section length is adjustable from 20 - 50 cm.

The machine may only be used to process firewood.

2.8 Incorrect use

Any incorrect use or use other than that specified under "Proper use" is expressly forbidden.

3 General

3.1 Scope

This user manual applies to the following machines:

Machine type

Item no.*	Type	Drive
M3855	Spaltfix S-350 - Z	PTO shaft
M3875	Spaltfix S-350 - ZE15	PTO shaft/electric motor

*The article number is stamped on the machine's rating plate.

Models

Special equipment

.....C	With oil cooler
.....T	Tractor travel gear
.....KF40	4 m sliding conveyor belt, hydraulic drive
.....KF50	5 m sliding conveyor belt, hydraulic drive
F0002942	Timber support block with lifting device

Additional equipment

F0001864	Feed extension
F0002952	Chips - 100 mm extractor connection
F0001898	Tank heating
F0001836	6-billet splitting blade
F0001832	8-billet splitting blade
F0002955	Lighting unit
F0002251	Hour counter for machines with PTO drive
Longitudinal conveyors	are available in lengths of 2, 3 and 4 m
Cross conveyors	are available in lengths of 2.2 / 3.2 and 4.2 m - with 2 to 4 chain strands

3.2 Description

The Spaltfix S-350 machine is a firewood processing machine which is used to cut and then split firewood.

The log is cut in a horizontal position and is held in place with the claw while being cut.

The log is then cut to length by the hydraulically advanced saw blade.

Once the log has been sawn through, it drops into the splitting trough.

The ram of the hydraulic splitter advances and presses the log against the splitting knife.

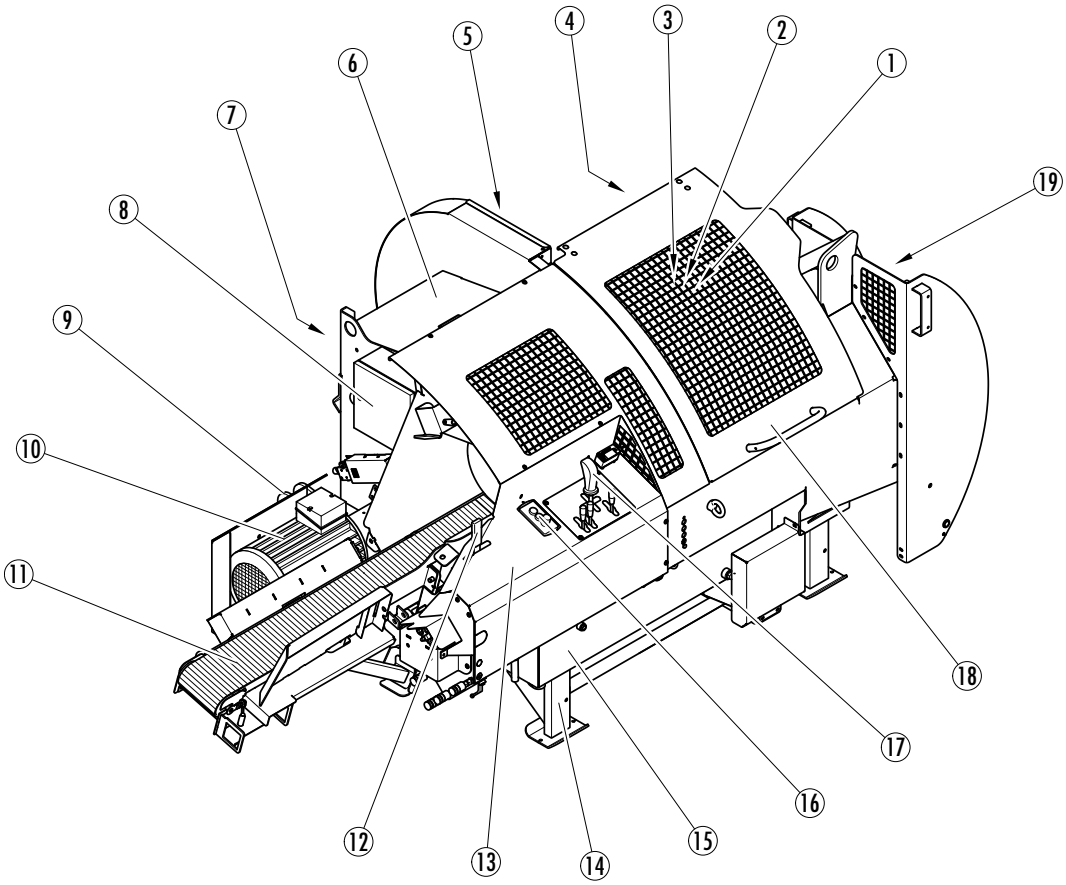
The hydraulically height-adjustable splitting knife allows the optimum setting to be achieved in any operating situation.

A choice of options is available for discharging the split logs, e.g. via a conveyor belt.

The cutting and splitting tool is hydraulically driven.

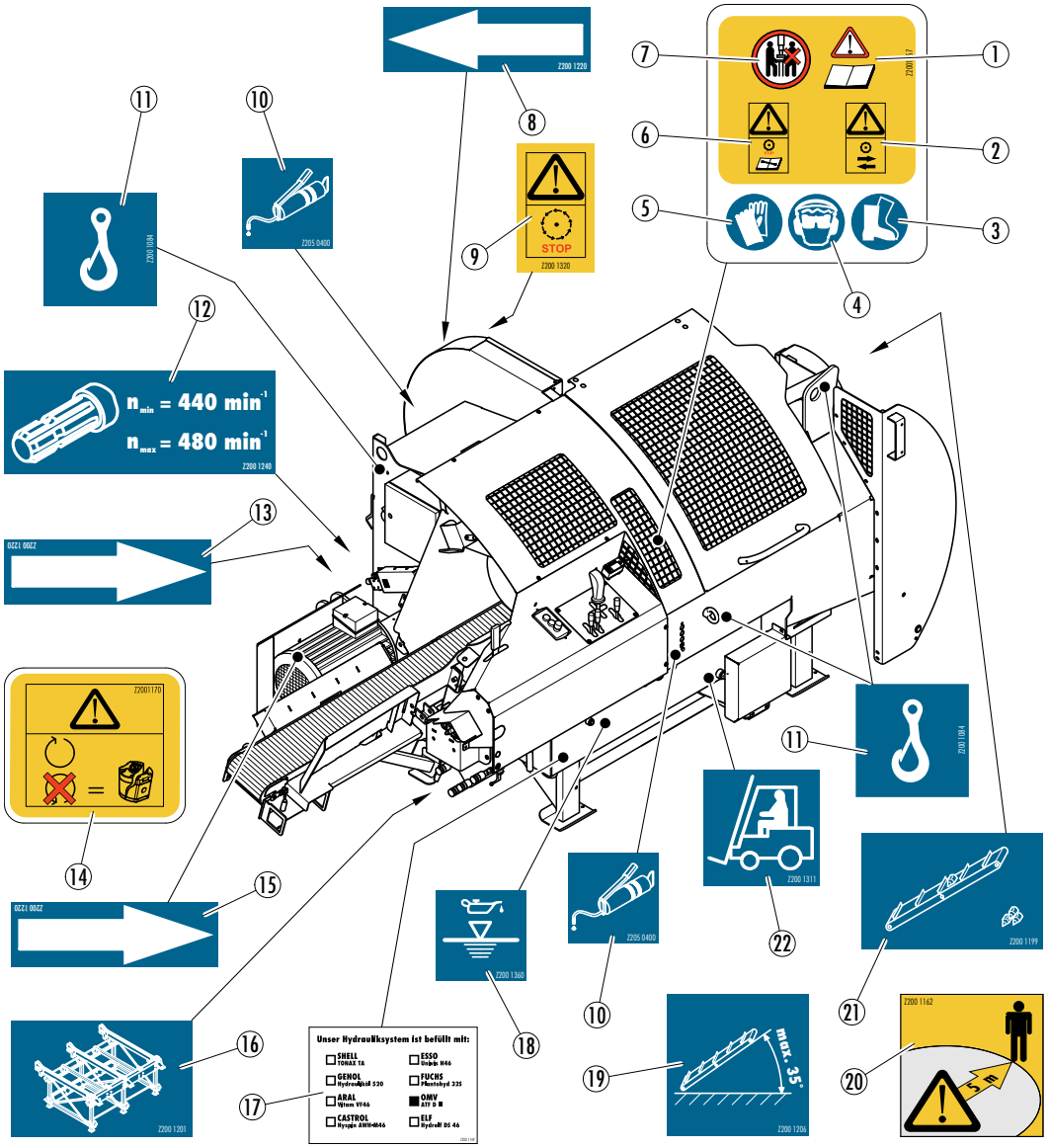
The machine is driven by an electric motor or a pto.

3.3 The most important components of the machine



1	Hold-down	11	Feed
2	Splitter	12	Operation - splitter
3	Saw unit	13	Front guard plate
4	Identification plate	14	Frame
5	Rear safety guard	15	Hydraulic tank
6	Cover - V-belt	16	Control box
7	Drive - PTO shaft	17	Operation
8	Switch/plug	18	Safety guard
9	Three-point linkage	19	Splitting blade
10	Electric motor		

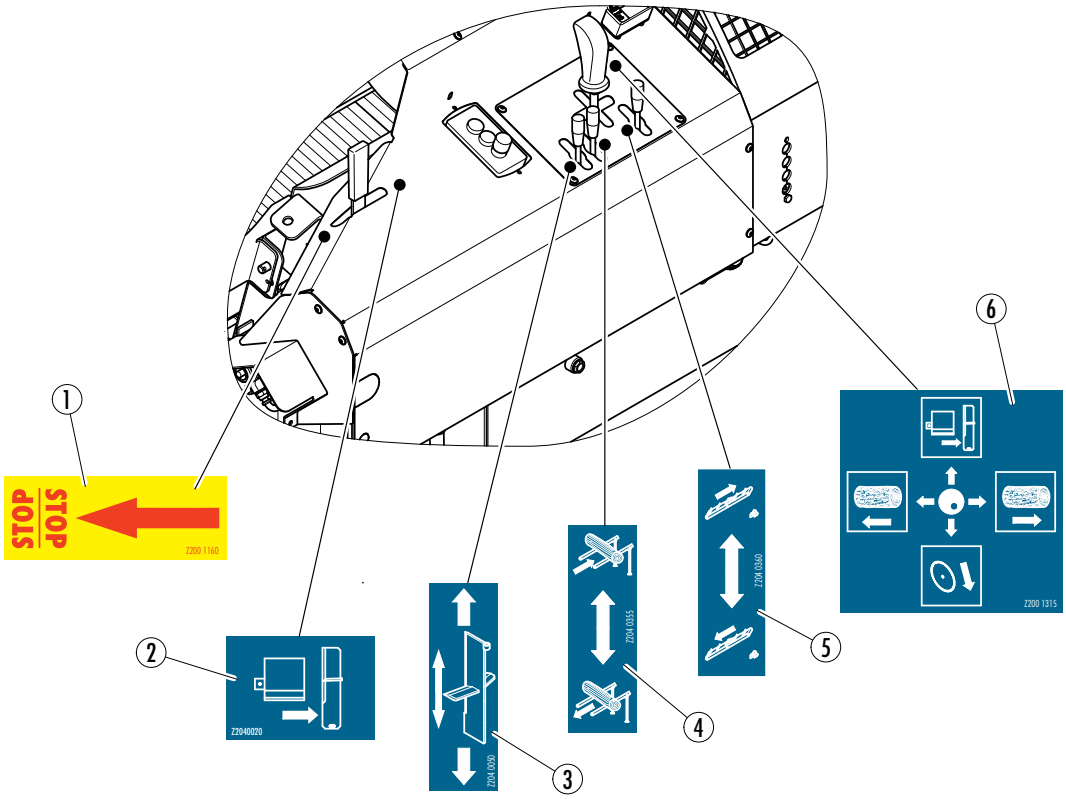
3.4 Labels and their meanings



1	Read the operating instructions before starting the machine.
2	Caution, moving parts.
3	Wear safety shoes.
4	Wear goggles and ear protection.
5	Wear protective gloves.
6	Do not carry out any repair, set-up, maintenance or cleaning work unless the drive unit is switched off and the tool is at rest.
7	Only work alone.
8	Saw blade rotation direction
9	Caution, tool continues to run.
10	Lubricating point
11	Lift here!
12	PTO speed
13	Power take off rotation direction
14	Warning! Monitor the direction of rotation of the motor. If the motor is rotating in the wrong direction, the pump may fracture!
15	Electric motor direction of rotation

16	Connection: Cross conveyor
17	Our hydraulic system is filled with:
18	Hydraulic oil level
19	Maximum angle (on conveyor belt)
20	Danger area (on conveyor belt)
21	Connection: Conveyor belt
22	Lifting point for forklift

3.4.1 Labels - operation



1	Operation - stop splitter
2	Operation - splitter (manual)
3	Operation - splitting blade (up / down)
4	Operation - cross-conveyor (forwards / backwards)
5	Operation - conveyor belt (forwards / backwards)
6	Main controls - feed (forwards / backwards, feed table, saws)

4 Set-up

Ensure the machine is stable before starting it.

Set up the machine on a level, firm and clear work surface.

The machine must be placed directly on the ground. Do not place wooden boards, flat pieces of metal etc. underneath it.

4.1 Folding down the feed

See: Feed [➙ 19]

4.2 Working position - Conveyor belt

- See: Conveyor belt [➙ 37]

5 Start-up

Before starting to operate the machine, please check that the protective and safety systems are working and also the hydraulic hoses and oil level.

Check that the saw blade is firmly seated before each use.

5.1 Driven by electric motor (type E)

5.1.1 Machines with 400 V motor

The machine must only be operated on a 30 mA FI fault current protection circuit.

Work on electrical equipment must only be carried out by qualified electricians.

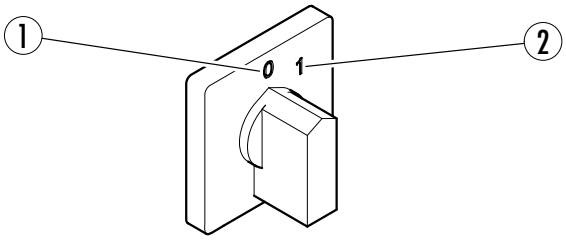
Type E15

Connect the machine to the mains:

- Mains voltage 400 V / 50 Hz
- Circuit-breaker 32 A (tripping characteristic C)
- For the feed, a cable cross-section of at least 6 mm² must be used.

☞ This cable cross-section is only a minimum specification. In the event of a lengthy supply cable, its size must be determined by an electrician.

Turn the switch to the ON position.

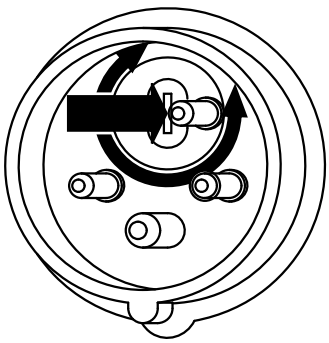


1	Neutral position	2	On position

Note the rotation direction of the electric motor (see arrow on motor).

If the motor is rotating in the wrong direction:

A phase inverter in the plug controls the direction of rotation of the motor (press in the disc in the plug with a screwdriver and turn 180˚).

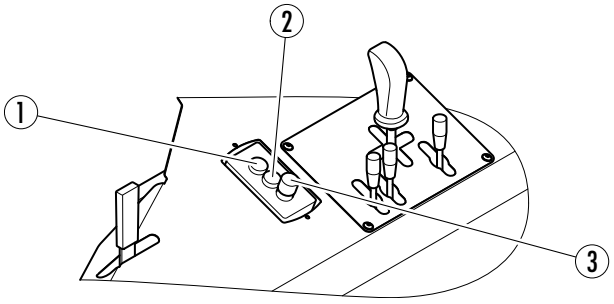


A tight plug connection can rip the CEE plug out of the switch housing.

- This can be remedied using standard plugs and a silicone spray.

☞ Any such damage to the switch is not covered by the guarantee.

5.1.2 Control box



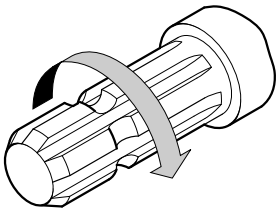
1	Button (green) – Start system	3	Emergency stop
2	Button (red) – Stop system		

On the control box there are two buttons and an emergency stop.

- Use the green button to start the system.
- Use the red button to stop the system.
- Use the emergency stop to stop the electric motor.
  - The emergency stop has to be unlocked (turn clockwise) in order to re-start.

5.2 Driven by tractor via universal joint shaft (type PZG)

- Assemble the machine on the three-point linkage of the tractor.
- Attach the universal joint shaft and secure with the safety chain.



- Clockwise rotation of the tractor PTO shaft.
- Turn the tractor's manual throttle to minimum.
- Slowly engage the tractor PTO shaft and allow the machine to start moving.
- Set the required PTO speed using the manual throttle.

Maximum PTO shaft speed:

- 480 rpm

The maximum PTO shaft speed must on no account be exceeded, otherwise the oil will become too hot. This leads to premature wear and leaks in the pump, cylinder and hydraulic pipes.

Before disengaging the universal joint shaft, set the manual throttle of the tractor to minimum.

The universal joint shaft must be stored in the universal joint shaft linkage when it is disconnected.

6 Operation

☞ At outdoor temperatures below 0°C, let the machine idle for approximately five minutes to allow the hydraulic system to reach the correct operating temperature (the hydraulic pipes will then be warm to the touch).

6.1 Work operation

Only one person may operate the machine at a time.

Ensure that no other people are in the vicinity of the machine.

- Start the machine nehmen [→ 16].
- Place the wood on the feed.

6.1.1 Operating the feed, saw and splitter

- Using the control lever (Infeed - advance) move the log as far as the log stop.
- Pull the control lever towards you (Saw) and saw through the log.
- Hold the lever towards you until the log has been completely sawn through.
- Use the control lever (Split) to start a splitting stroke (push the lever briefly away from you).

The splitting knife can be adjusted (to set the split centre point).

- Adjust the centre of the splitting knife using the control lever (Splitting knife – up / down).

6.1.1.1 Notes on sawing

The drive must always be switched off before clearing a blockage.

6.1.1.2 Notes on splitting

Only use logs up to a diameter of 7 - 35 cm.

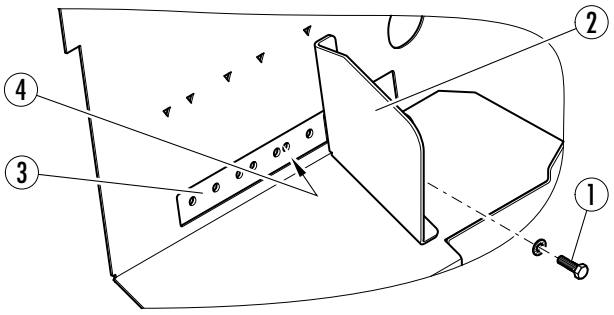
Remove jammed wood from the splitting blade with a striking tool.

6.1.2 Stop function

- If the safety guards are opened during work, the splitter will stop and the saw will return to its home position.
  - – After closing the safety guards the splitting process will continue from where it was interrupted.
- When the emergency stop on the control box is pressed.

See: Control box [→ 17]

6.1.3 Adjusting the log length

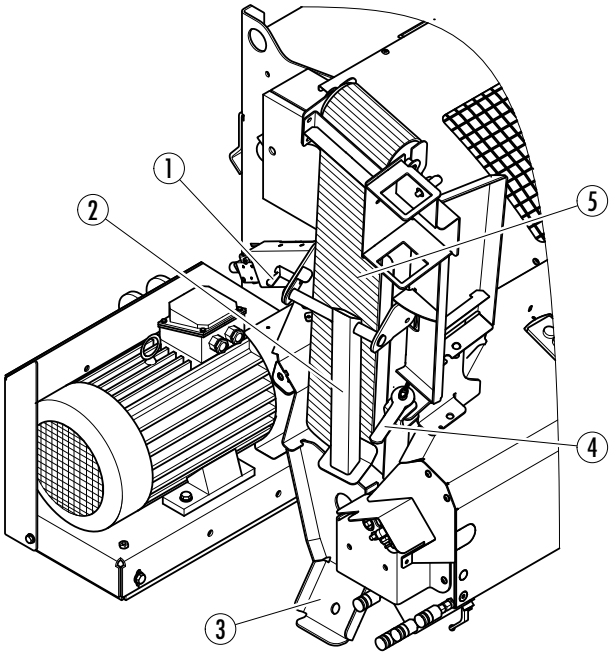


1	Fastening screw	3	Stop support
2	Stop	4	Threaded hole

The log length can be adjusted to 20, 25, 33, 40 or 50 cm using the stop.

1. Undo the fastening screw and remove the stop.
   – On the stop support there are threaded holes for adjusting the cut length required.
2. Select the desired length and retighten the fastening screws.

6.2 Feed



1	Snap-in lock	4	Connecting pin
2	Support foot	5	Feed
3	Support holder		

Working position:

- Remove the clip pin.
- Open the snap-in lock by turning it.
- Unlock and remove the connecting pin.

- Fold down the feed.
  - Make sure the support foot fits in the support foot holder.
  - Ensure that the feed belt is centred to prevent it being damaged.
- Pull out the feed extension (optional).

Transport position:

- Proceed as above but in the reverse order.

7 Switching off the machine

☞ Before switching off the machine, depressurise all hydraulic functions by placing all control levers in the neutral position.

Driven by electric motor (Type E)

Press the red button on the control box.

- See: Control box [→ 17]

Move the switch to the **0 position**.

Driven by tractor via cardan shaft (type PZG)

Disengage the cardan shaft on the tractor.

- Before disengaging, turn the manual throttle to minimum.

8 Transport

Fold up the feed

See: Feed [➞ 19]

Swing the conveyor belt inwards

- See: Conveyor belt [➞ 37]

8.1 Transporting by three-point linkage on the tractor

Attach the machine to the three-point linkage and use the tractor hydraulics to raise it.

If the tractor's rear lights are obscured, a light must be fitted to the rear of the machine (e.g. magnetic holder, clip-on light, etc.)

Observe the road traffic regulations when driving on public highways.

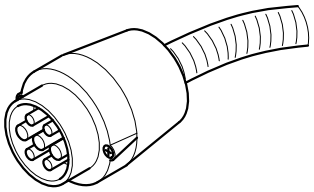
Maximum transport speed: 25 km/h

☞ When the machine is uncoupled from the tractor, it must be placed on a firm, level surface.

8.2 Transportation using the travel gear

Tractor travel gear

- Attach the towbar to the tractor.
- Crank up the jockey wheel.
- Release the parking brake.
- Check tyre pressure - max 3.5 bar.
- Plug the lighting system plug into the tractor.



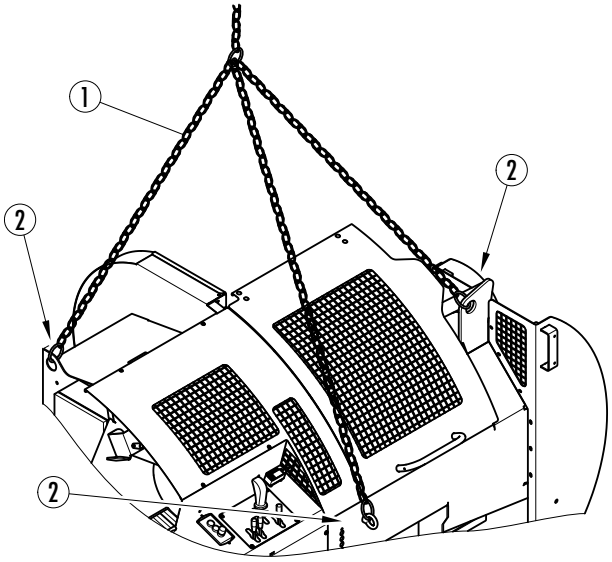
- Check that the lighting system is working properly.

Observe the road traffic regulations when driving on public highways.

Maximum transport speed: 6 km/h (10 km/h) - Observe local regulations.

☞ When the machine is uncoupled from the tractor, it must be placed on a firm, level surface.

8.3 Lifting with a crane



1	Lifting gear	2	Lifting lug

When using a crane, only lift the machine by the lifting lugs!
Only lifting gear with the permitted load capacity may be used.

9 Checks

Before carrying out any checks on the machine, the drive unit MUST be switched off!

Disconnect the machine from the mains.

9.1 Protective guards

All the protective guards (covers, safety grilles, etc.) must be in place.

9.2 Screw fittings

Tighten all screws and nuts after the first hour of operation.

Tighten the screws and nuts after every 100 hours of operation.

- Replace missing screws and nuts.

9.3 Hydraulic lines

After the first hour of operation, check that all hydraulic connections are secure and are not leaking.

Check that all hydraulic connections are secure and are not leaking after every further 100 hours of operation.

- Damaged hydraulic lines must be replaced immediately.

9.4 Saw blade

Check that the saw blade is firmly seated before each use.

Check the saw blade for wear and damage before each use. Sharpen or replace it if necessary.

9.5 V-belt tension

The V-belts must be tensioned so that they deflect about 8 mm in the middle when thumb pressure is applied.

- See: Changing the V-belt [➙ 31]

9.6 Oil level

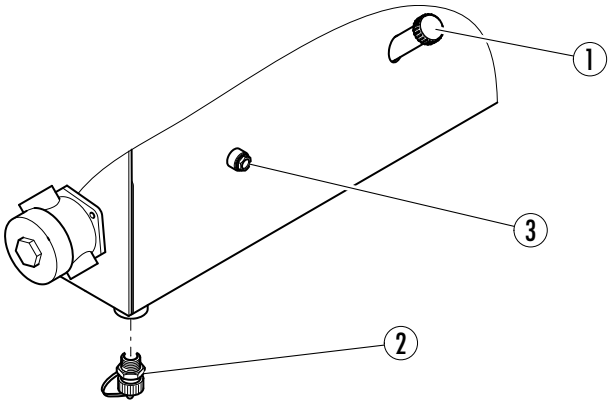
To check the oil level place the machine on an even surface.

☞ Check the oil level with the pusher retracted.

9.6.1 Hydraulic oil level

When the oil sight glass is filled above halfway, the oil level is at its maximum.

When the oil level is towards the bottom of the oil sight glass, the oil level its at its minimum.



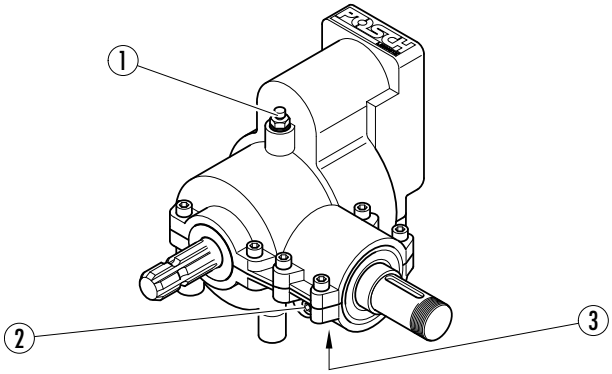
1	Oil inlet screw	3	Oil sight glass
2	Oil drain screw		

If this is the case, the hydraulic oil must be topped up immediately.

- See: Changing the hydraulic oil [➙ 27]

☞ The oil filter only needs to be checked when the oil is changed.

9.6.2 Transmission oil level



1	Oil inlet screw	3	Oil drain screw
2	Oil level screw		

If the oil seeps out of the hole of the oil level screw when the machine is on level ground, the maximum oil level has been reached.

If the oil level is below the hole, this is the minimum oil level.

If this is the case, the transmission oil must be topped up immediately.

- See: Changing the transmission oil [➙ 28]

10 Maintenance

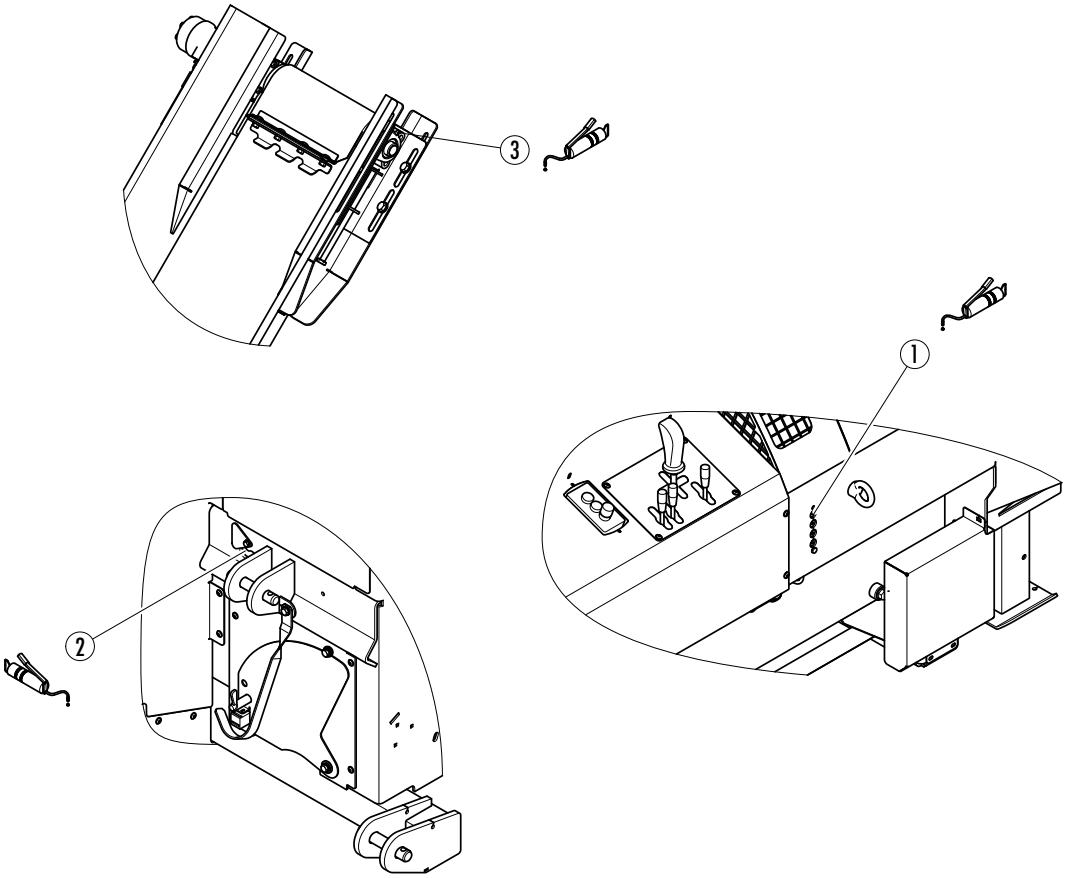
Before carrying out any maintenance on the machine, the drive unit MUST be switched off!
Disconnect the machine from the mains.

Work on electrical equipment must only be carried out by qualified electricians.
Never work without the protective guards in place.
Only use original - POSCH - spare parts.

10.1 Lubrication

Dispose of oily and greasy parts and oil residues in accordance with legal regulations.

10.1.1 Lubrication schedule



Lubrication intervals	Item	What/where
Weekly (every 40 operating hours - or less depending on application)	1	On the front of the central lubrication point - for the splitting blade guides
	2	On the back of the central lubrication point - for the saw shaft
Monthly (every 160 operating hours - or less depending on application)	3	On conveyor belt, top housing bearing

☞ The lubrication points are marked with the lubricate symbol.

Recommended lubricating greases:

Manufacturer	Type
Genol	Multi-purpose grease
Fuchs	Multi-purpose grease 5028

10.2 Oil changing

Old oil must be disposed of in an environment-friendly manner. Find out about the environmental regulations in your country.

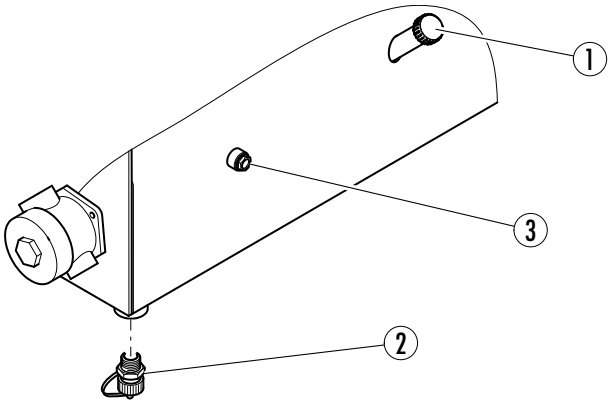
10.2.1 Changing the hydraulic oil

Carry out the first oil change after 500 hours of operation. Thereafter change the oil at least once per year.

☞ An oil change is not required any earlier as we carry out a secondary flow filtration during the final check where all dirt particles are removed.

- Cleanliness test in line with ISO 4406: cleanliness class 14/11 fineness 1.2 ym / oil load - low.

Changing procedure:



1	Oil inlet screw	3	Oil sight glass
2	Oil drain screw		

- Retract the pusher before changing the oil.
- Remove the ventilation screw.
- Open the oil drain screw.

☞ The oil drain screw is located on the base of the oil tank.

- Drain the old hydraulic oil into a container.
- Screw the oil drain screw back into the tank and fill with new hydraulic oil.
- Turn on the machine and allow it to run for a short while.
- Check the oil level and top up hydraulic oil if necessary.

Total filling capacity of the hydraulic system:

Quantity
60 litres

Our hydraulic system is filled with high-quality OMV ATF II transmission fluid.

- This oil has an extremely high viscosity index, exhibits excellent foaming and aging characteristics and excellent flow properties at low temperatures and protects reliably against wear and corrosion.
- Viscosity class ISO VG 46.

This high-quality oil comes highly recommended when changing the oil.

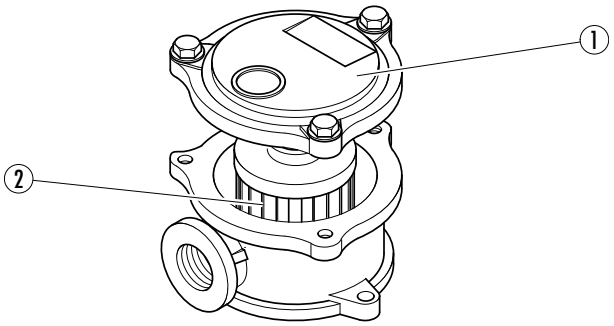
A mixture of products of the same quality poses no problem.

10.2.1.1 Recommended hydraulic oils

Manufacturer	Oil specification
OMV	ATF II
SHELL	Donax TA
ELF	Hydrelf DS 46
ESSO	Univis N46
CASTROL	Hyspin AWH-M 46
ARAL	Vitam VF46
GENOL	Hydraulic oil 520
FUCHS	Platohyd 32S * / Renolin B46 HVI

*.....biological hydraulic oils

10.2.2 Oil filter



1	Filter cover	2	Filter insert

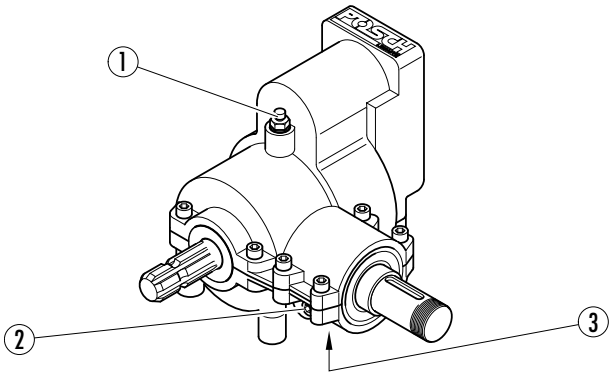
The filter insert should be changed every time the oil is changed.

Any aluminium particles can be disregarded, as these occur when the pump is running in.

Do not wash out the filter insert with petrol or paraffin products as these damage it.

10.2.3 Changing the transmission oil

The first oil change should be carried out after 100 operating hours, further oil changes should then be carried out every 500 operating hours or yearly.



1	Oil inlet screw	3	Oil drain screw
2	Oil level screw		

- Unscrew the oil inlet and oil drain screw.
- Let the old oil drain out, then replace the oil drain screw.
- Add the new transmission oil.
- Check oil level.

Total filling capacity
0.8 litres

Any other transmission oil can be used, so long as it is in viscosity class SAE 90.

10.2.3.1 Recommended transmission oils

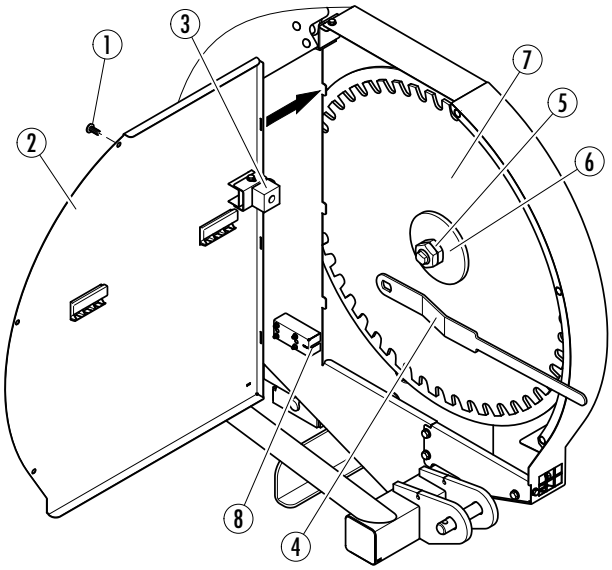
Manufacturer	Oil specification
OMV	Gear Oil MP SAE 85W-90
GENOL	Gear oil MP 90
FUCHS	Titan Gear Hypoid SAE 90

10.3 Changing the saw blade

Always wear protective gloves when handling saw blades.

Only strengthened POSCH saw blades may be used. Standard saw blades are too weak and pose a safety risk.

Observe the maximum saw blade speed specified by the manufacturer.



1	Hexagon bolt	5	Clamping nut
2	Rear safety guard	6	Spring flange
3	Wood insert	7	Saw blade
4	Circular saw wrench	8	Limit switch

- Undo the hexagon bolts of the safety guards and open the safety guards.
- Hold the circular saw shaft with the spring flange wrench and undo the clamping nuts with the circular saw wrench.
- Remove the spring flange and the saw blade.
- Put the new blade in and secure it.

The clamping nut must be screwed back on as it was before.

☞ Position the saw blade in such a way that the saw blade teeth are pointing in the direction of rotation (see arrow).

- Fasten the wood insert about 2 mm away from the saw blade.

☞ Ensure that all chips are removed from around the limit switch.

The tongue of the limit switch must slip easily into the limit switch when closing.

10.3.1 Recommended saw blade

Item no.	Diameter	Hole	Teeth	Type
Z1300130	900 mm	40 mm	96	Carbide (Widia)

Only saw blades conforming to the EN 847-1 standard may be used.

Safety of the saw blade

In accordance with the EN 1870-6 standard, the saw blade is secured using Aluminium inserts.

These are subject to wear and should be replaced **as soon as they are worn out**.

10.4 Sharpening the saw blade

☞ Saw blades should only be resharpened by a specialist company.

Carbide saw blade

Usage tips for carbide saw blades

Carbide tipped circular saw blades have a long service life. These blades are high precision machine tools, so must always be correctly handled and used.

- The hardness of the carbide tips means they must be protected from nicks.
  - Incorrect storage can result in damage to the tips of the teeth. Place the circular saw blade on foam rubber or a similar surface.
  - Do not attempt to cut any nails, metal brackets or anything similar that may be in the wood.
  - The circular saw blade must not be subjected to any impacts or knocks.
- Before starting up the motor, check the free-running of the circular saw blade and ensure that the direction of rotation is correct.
- Running down circular saw blades must not be slowed by external means.
- Feed slowly and continuously, avoid any jerky cutting movements.
- Clean the circular saw blade regularly with a resin removing agent.
- In no-load operation the carbide circular saw blade generates less noise. When cutting the noise level depends on the type of wood being cut.

☞ Incorrect use will invalidate any warranty claims. Resin-coated blades are excluded from the warranty exchange service.

10.5 Changing the V-belt

10.5.1 Tips on changing the V-belt

If one V-belt is being changed, then all V-belts must be changed!

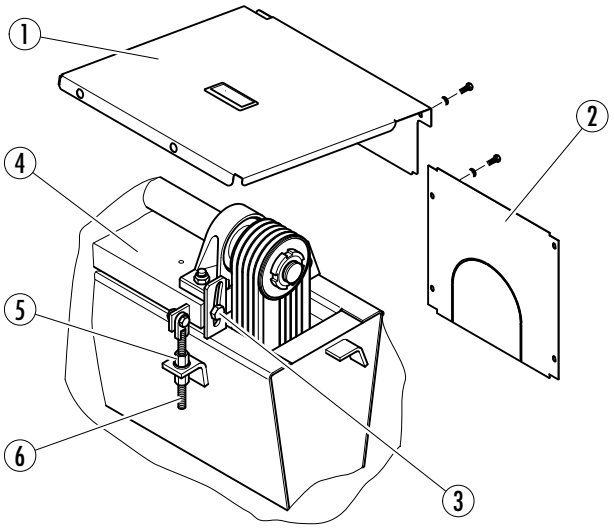
The V-belts must be fitted loose. If they are "forced" onto the V-belt pulley, they may be damaged and quickly tear.

☞ The V-belts must be tensioned so that they deflect about 8 mm in the middle when thumb pressure is applied.

10.5.1.1 V-belt types

Machine type	Belt	Number (pcs.)	Item no.
Z	XPA 1285 Lw	5	Z1940086
ZE15	XPA 1285 Lw	5	Z1940086

10.5.2 Changing the V-belts on PTO drives



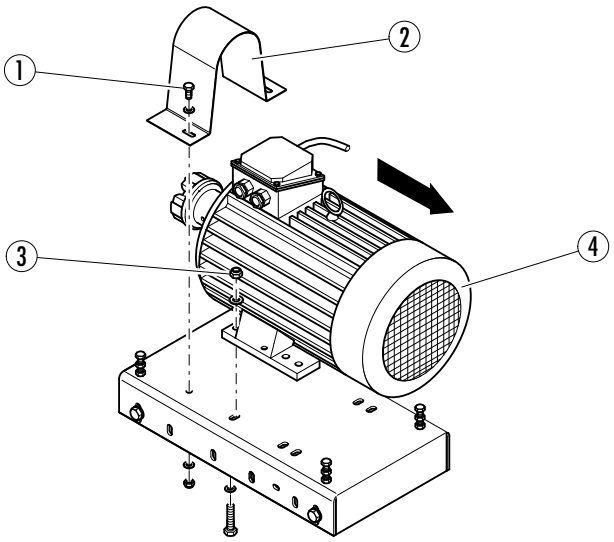
1	Cover - V-belt	4	Adjustment plate
2	PTO shaft cover	5	Hexagon nut
3	Hexagon bolt	6	Tensioning screw

- Remove the cover for the V-belt tensioning and the PTO shaft cover.
- Undo the four hexagon bolts of the adjustment plate.
- Undo the hexagon nuts of both tensioning screws, so that the adjustment plate is lowered.
- Remove the old V-belts.
- Fit the new V-belts.
- Tension the V-belts.
- Lock the tensioning screw.
- Tighten the four hexagon bolts of the adjustment plate and refit the cover.

Before operating, all protective guards must be attached to the machine.

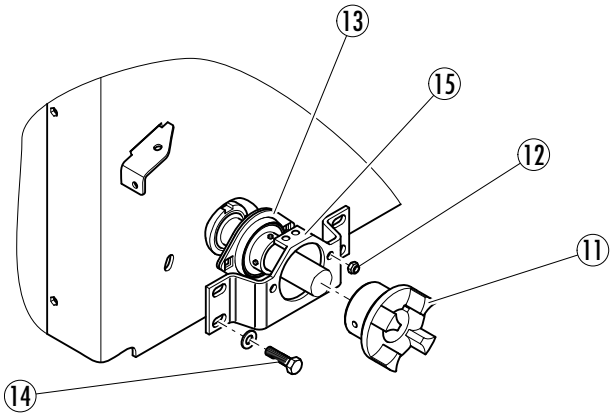
10.5.3 Changing the V-belts on PTO/electric drives

- Remove the cover for the V-belt tensioning and the PTO shaft cover.
- Undo the four hexagon bolts of the adjustment plate.
- Undo the hexagon nuts of both tensioning screws, so that the adjustment plate is lowered.



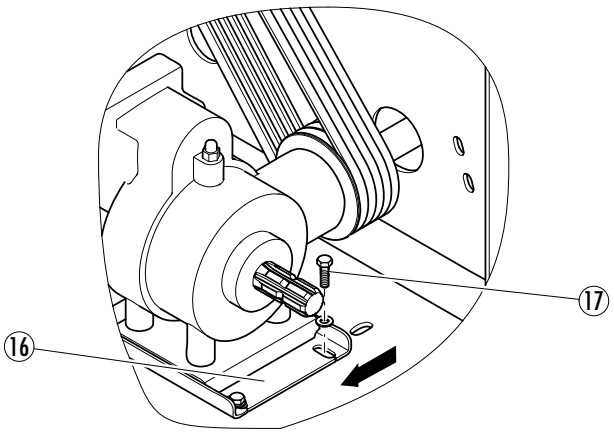
7	Hexagon bolt	9	Hexagon nut
8	Guard plate	10	Electric motor

- Undo the hexagon bolts of the guard plate and remove the plate.
- Undo the self-locking hexagon nuts for the electric motor and push the motor away in the direction shown by the arrow.



11	Clutch member	14	Hexagon bolt
12	Self-locking hexagon nut	15	Bearing flange
13	Plate flange bearing		

- Undo the clutch member.
- Undo both self-locking hexagon nuts of the plate flange bearing.
- Undo the four hexagon bolts from the bearing flange and pull the bearing flange forwards.
- Pull the plate flange bearing forwards, undo the locking screw and remove the parallel key.

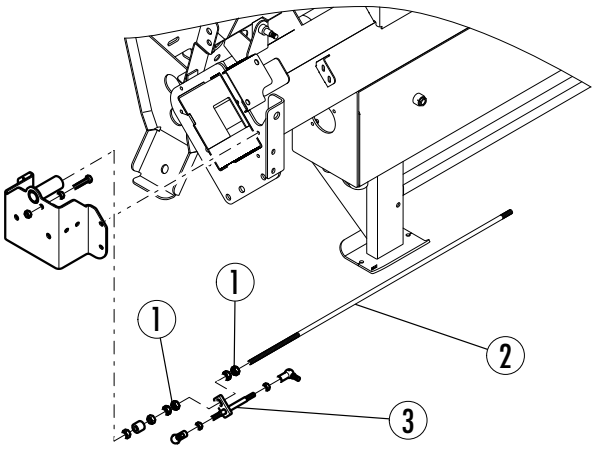


16	Transmission foot	17	Hexagon bolt

- Mark the position of the transmission foot using a marker pen before undoing it (this ensures that it will not have to be realigned again later).
- Undo the hexagon bolts of the transmission foot and push the transmission in the direction shown by the arrow.
- Remove the old V-belts.
- Fit the new V-belts.
- Put the transmission back in the marked position and bolt in place.
- Tension the V-belts.
- Lock the tensioning screw.
- Tighten the four hexagon bolts of the adjustment plate and screw on the the cover plate.
- Fit the bearing flange and the plate flange bearing. Then screw on the cover.
- Fit the electric motor and put the guard plate back on.

Before operating, all protective guards must be attached to the machine.

10.6 Splitting



1	Lock nut	3	Valve shut-off rod
2	Shut-off rod		

If the splitter pusher does not automatically retract, proceed as follows:

1. Remove the front control panel and guard plate.
2. Undo the lock nuts and turn inwards slightly - the shut-off rod will be shortened slightly.
3. Lock the nuts in this new position.

– Ensure a play of between 1 and 2 mm between the nuts and the valve shut-off rod (3).

4. Switch on the machine and carry out a work cycle with no wood.

☞ Repeat points 1-4 until the splitter is working correctly.

10.7 Limit switch

If the motor will not start on machines with a PTO/electric drive, the limit switch may be dirty, incorrectly adjusted or defective.

- Limit switch dirty.
  - Clean all dirt form the limit switch (using compressed air if necessary).
- Limit switch incorrectly adjusted:
  - Readjust limit switch or limit switch tongue.
- Limit switch defective:
  - Replace limit switch.

10.8 Feed belt

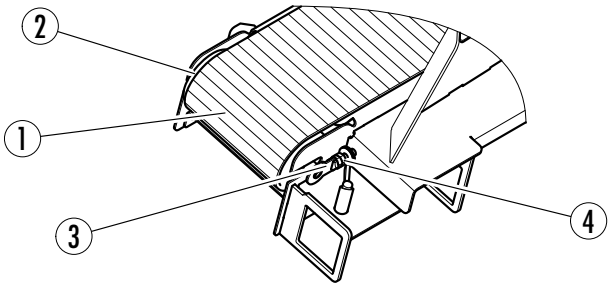
10.8.1 Notes regarding the conveyor belt

Check that the belt runs centrally. It must not run off centre.

- If this happens, centre the belt by adjusting the drive pulley or return drum.

☞ From time to time remove the material that drops down underneath the conveyor belt, otherwise the belt may be damaged.

10.8.2 Conveyor belt - ensuring the machine is running centrally



1	Belt	3	Tensioning screw
2	Return drum	4	Lock nut

If the belt is not running centrally over the drive or return drum, its direction of movement can be adjusted.

1. Loosen the lock nuts on both tensioning screws.
2. Tension the return drum by tightening both tensioning screws evenly.
3. Tighten the lock nuts again.

10.8.3 Tensioning the belt

The conveyor belt may become slack over time as a result of wear and tear. If this happens, the belt must be retensioned.

1. Loosen the lock nuts on both tensioning screws.
2. Tension the conveyor belt by tightening both tensioning screws evenly.
3. Once the belt is tight enough (its underside should not sag), then the lock nuts on the tensioning screws should be tightened up again.

10.9 Cleaning

Before carrying out any cleaning work on the machine, the drive unit MUST be switched off!

Disconnect the machine from the mains.

Clean the machine regularly to ensure proper operation.

Only wash new machines (during the first 3 months) with a sponge.

- The paint is not yet completely set, so cleaning with a high pressure cleaner may damage the finish.

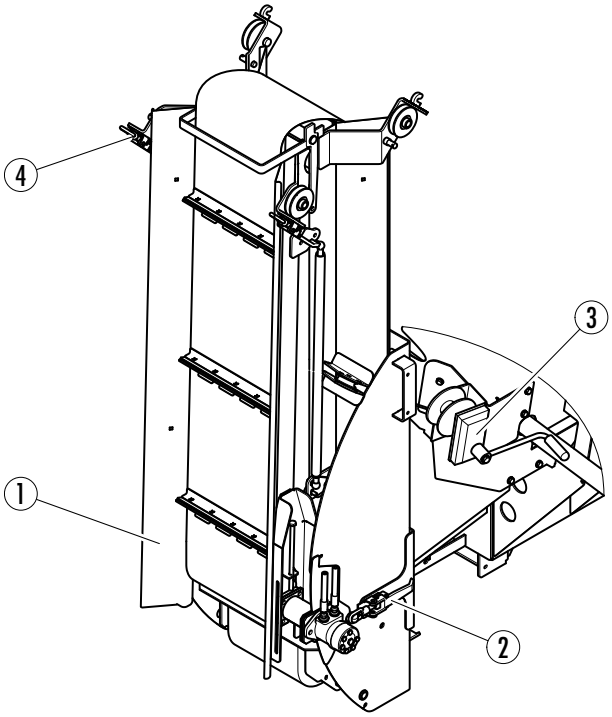
11 Special equipment

11.1 Conveyor belt

11.1.1 Conveyor belt types

Conveyor belt type	Conveyor belt length	Conveyor height	Belt width
KF40	400 cm	250 cm	30 cm
KF50	500 cm	300 cm	30 cm

11.1.2 Set up conveyor belt



1	Conveyor belt	3	Rope winch
2	Lower cam-type closure	4	Upper cam-type closure

Working position:

- Pull out the spring pin.
- Generate some tension with the rope winch, so that the securing pipe can be pulled out of the hole on the frame.
- Fold out the conveyor belt completely using the rope winch, until the rope becomes slack and the conveyor belt is stretched out.

☞ If necessary, undo the folding pipe and use it to push the conveyor belt into the outstretched position.

- Use the cam-type closure to secure the upper and lower parts of the conveyor belt.

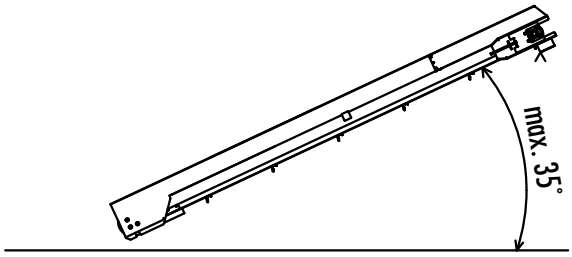
Setting the conveyor belt angle:

- Crank the conveyor belt to the desired height using the rope winch.
- Mount the chain on both sides in this position.
  - The smallest angle is achieved with the whole chain length.
  - A steeper angle can be achieved by attaching the chain shorter on the fixing hook.

Ensure that the chain is correctly attached to the fixing hook.

- Never hook the chain onto the point of the hook.
- Release the rope again so that it is slack.

The angle of the conveyor belt may not exceed 35° or it will be destroyed during splitting.



Transport position:

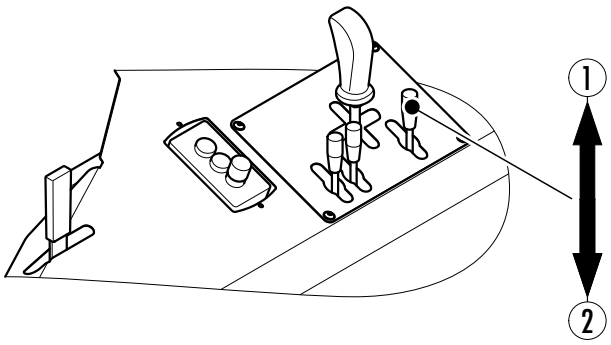
- Proceed as above but in the reverse order.

11.1.3 Connection - conveyor belt

- Connect the hydraulic hoses of the conveyor belt to the machine.
  - Connect the hydraulic hoses to the hydraulic sleeves. Ensure that colours match; blue dust caps (flow) and yellow dust caps (return) go with one another.

If the conveyor belt is not connected, the dust caps must be put on the connectors and sleeves to protect them from dust and dirt.

11.1.4 Operation - conveyor belt



1	Conveyor belt - forwards	2	Conveyor belt - return

- Switch on the conveyor belt using the control lever (conveyor belt on).

11.1.5 Maintenance - conveyor belt

11.1.5.1 Notes regarding the conveyor belt

Check that the belt is running centrally. The belt drive dogs must not move.

- If they do, the belt must be corrected so it runs centrally by adjusting the drive pulley or return drum.

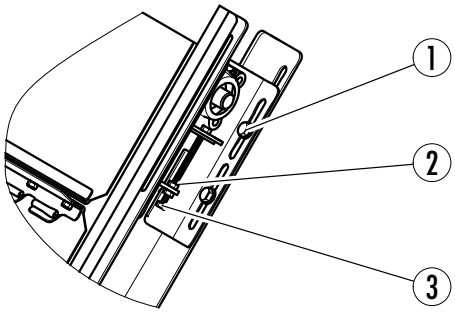
☞ From time to time remove the material that drops down underneath the conveyor belt to prevent damage to the belt drive dogs.

11.1.5.2 Conveyor belt - set central running

If the conveyor belt is not running centrally on the drive and/or tail pulleys, it is possible to adjust the direction of travel.

- Slightly loosen the fastening screws on each side of the conveyor belt.
- Loosen the lock nuts on both tensioning screws.
- Align the return drum by tightening both tensioning screws evenly.
- Tighten the lock nuts again.
- Tighten the fastening screws on both sides.

11.1.5.3 Tension conveyor belt

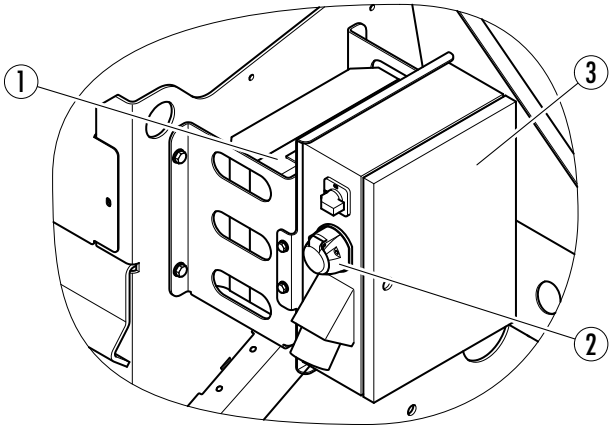


1	Fastening screw	3	Tensioning screw
2	Lock nut		

The conveyor belt may become slack over time as a result of wear and tear. If this happens, the belt must be retensioned.

- Move the conveyer belt to the working position.
- Slightly loosen the fastening screws on each side of the conveyor belt.
- Loosen the lock nuts on both tensioning screws.
- Tension the upper part of the conveyor belt by tightening both tensioning screws evenly.
- After the belt has been tensioned sufficiently, lock the tensioning screws again using the lock nuts.
- Tighten the fastening screws on both sides.

11.2 Oil cooler

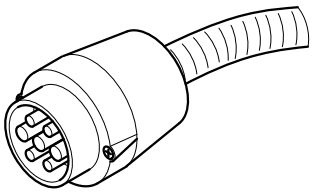


1	Oil cooler	3	Switch cabinet
2	12 V socket		

The oil cooler protects the hydraulic system against high temperatures and hence the need for frequent maintenance.

PTO drive connector:

- Connect the 7-pin plug to the tractor.



Supply voltage 12 V

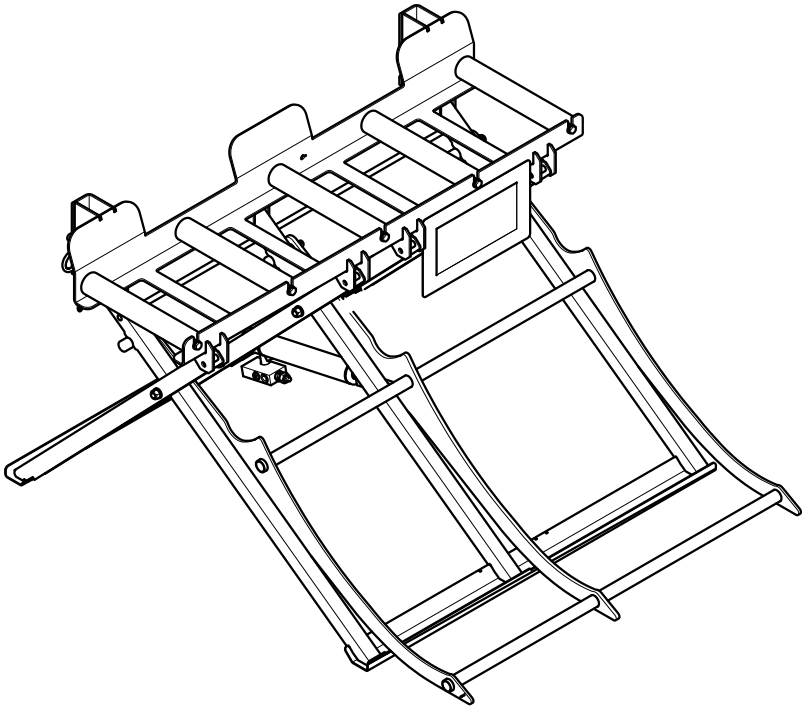
16 A continuous current

- Switch on lights on tractor (depending on model).

Electrical drive connector:

- Connect the 7-pin plug to the 12 V socket of the switch cabinet.

11.3 Lifting device

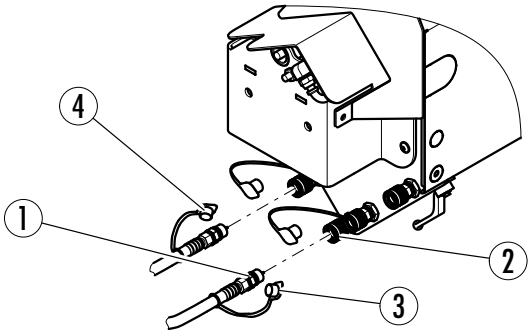


The log can easily be raised with the hydraulic lifting device.

11.3.1 Setting up the lifting device

Position the lifting device so it is aligned with the machine.

11.3.2 Connecting the lifting device

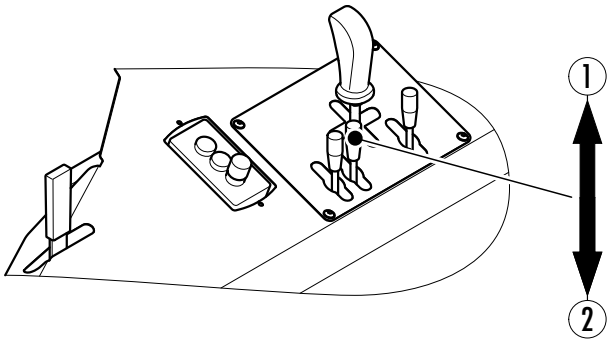


1	Hydraulic connector	3	Dust cap - blue
2	Hydraulic sleeve	4	Dust cap - yellow

- Connect the hydraulic hoses of the lifting device to the machine.
  - Connect the hydraulic connectors to the hydraulic sleeves. Ensure that colours match; blue dust caps (flow) and yellow dust caps (return) go with one another.

If the transverse feeder is not connected, the dust caps must be put on the connectors and sleeves to protect the latter from dust and dirt.

11.3.3 Operation - lifting device

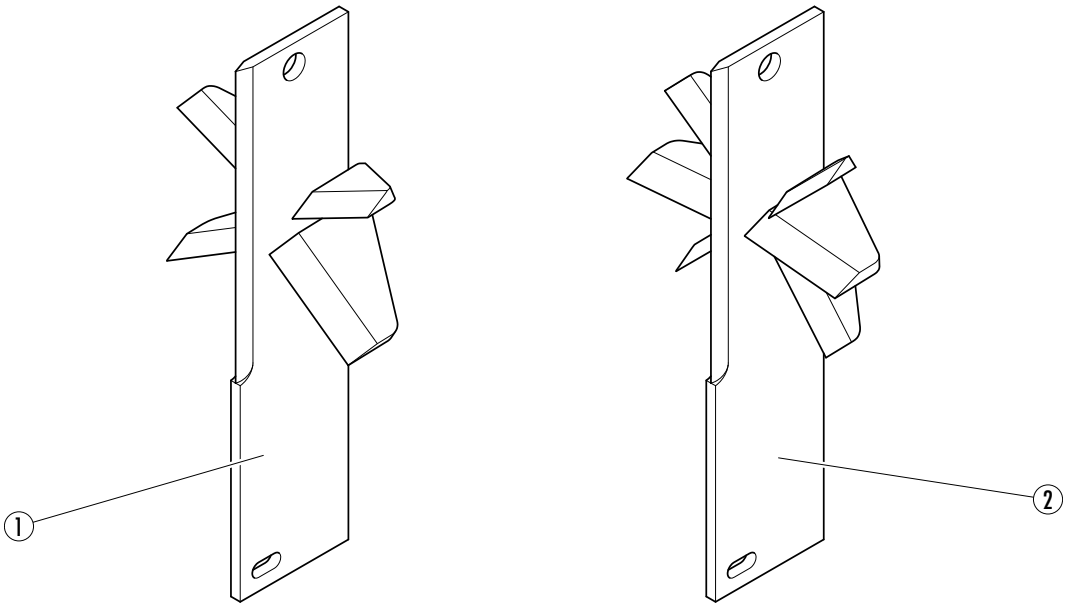


1	Lifting device - up	2	Lifting device - down

- Lift the log with the control lever (lifting device - up).

12 Additional equipment

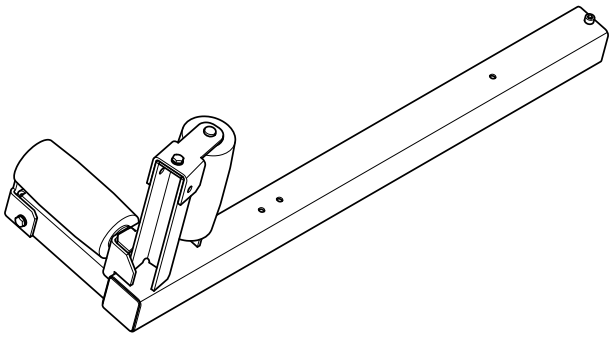
12.1 Splitting blade variants



1	6-billet splitting blade	2	8-billet splitting blade

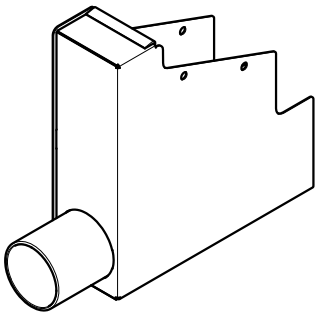
The log is split into 4, 6 or 8 pieces (billets) in one splitting process.

12.2 Feed extension



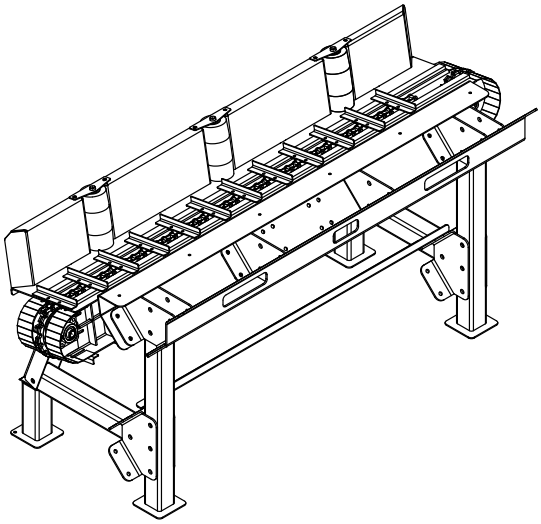
This allows longer logs to be laid and supported on the feed conveyor belt.

12.3 Chip extractor connection



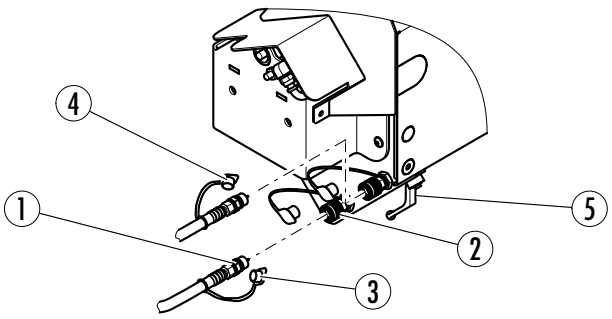
Connection for the extraction of chips.

12.4 Longitudinal conveyor



The logs are laid on the longitudinal conveyor and fed hydraulically into the machine.

12.4.1 Connection - longitudinal conveyor



1	Hydraulic connector	4	Dust cap - red
2	Hydraulic sleeve	5	Ball valve
3	Dust cap - green		

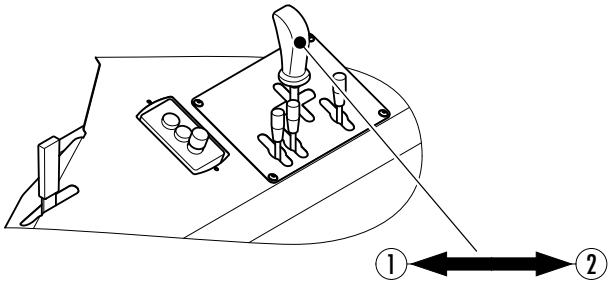
- Position the longitudinal conveyor so it is aligned with the machine.

- Connect the hydraulic hoses of the longitudinal conveyor to the machine.
  - Connect the hydraulic connectors to the hydraulic sleeves. Ensure that colours match; green dust caps (flow) and red dust caps (return) go with one another.
- The ball cock is used to turn the longitudinal conveyor on or off.
  - If the lever is horizontal, then the longitudinal conveyor is turned on, if vertical, then it is off.

If the longitudinal conveyor is not connected, the ball cock must be put in a vertical position before turning the machine on and the dust caps must be put on the connectors and sleeves to protect the latter from dirt and dust.

Ensure that the chain is always adequately tensioned.

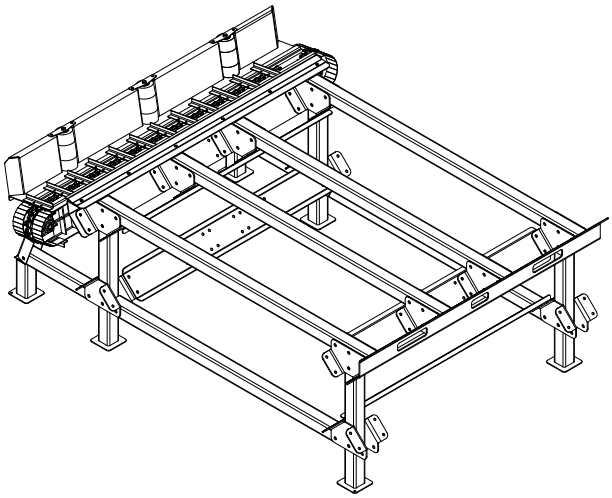
12.4.2 Operation - longitudinal conveyor



1	Longitudinal conveyor chain - backwards	2	Longitudinal conveyor chain - forwards

- Using the control lever (longitudinal conveyor chain - forwards) move the log up to the feed.

12.5 Transverse feeder

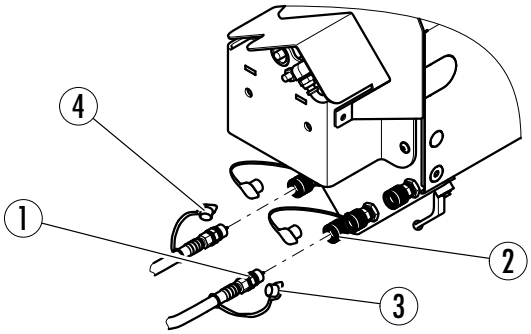


The logs are laid on the cross conveyor and fed hydraulically to the longitudinal or roller conveyor.

12.5.1 Setting up the cross conveyor

- Position the cross conveyor so it is aligned with the longitudinal or roller conveyor.

12.5.2 Connection - transverse feeder



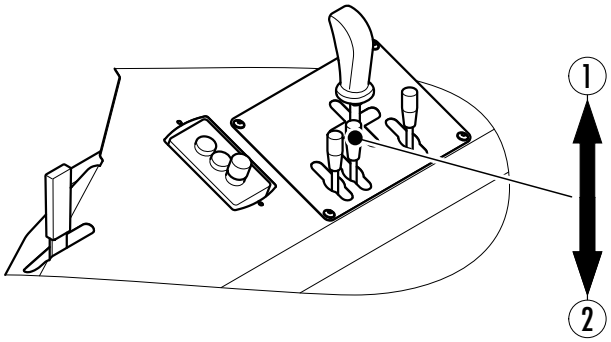
1	Hydraulic connector	3	Dust cap - blue
2	Hydraulic sleeve	4	Dust cap - yellow

- Connect the hydraulic hoses of the transverse feeder to the machine.
  - Connect the hydraulic connectors to the hydraulic sleeves. Ensure that colours match; blue dust caps (flow) and yellow dust caps (return) go with one another.

If the transverse feeder is not connected, the dust caps must be put on the connectors and sleeves to protect the latter from dust and dirt.

Ensure that the chain is always adequately tensioned.

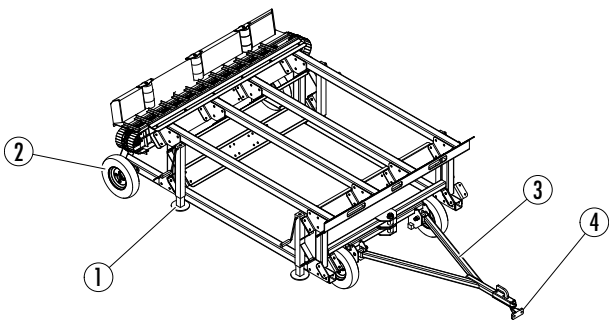
12.5.3 Operation - cross-conveyor



1	Transverse feeder chain - forwards	2	Transverse feeder chain - backwards

Using the control lever (cross-conveyor chain - forwards) move the log up to the longitudinal or roller conveyor.

12.5.4 Transverse feeder with tractor travel gear



1	Support foot	3	Towbar
2	Wheel	4	Spherical coupling

Before beginning work, the four support feet must be cranked fully downwards until there is no load on the wheels.

For transport, the timber support block is attached to the spherical coupling on the machine using the towbar.

During transport the support feet must be fully retracted and secured.

Observe the road traffic regulations when driving on public highways.

Maximum transport speed: 6 km/h (10 km/h) - Observe local regulations.

13 Troubleshooting

Before carrying out any troubleshooting operations on the machine it is essential to switch the drive off.

Disconnect the machine from the mains.

Work on electrical equipment must only be carried out by qualified electricians.

Fault	Possible cause	Remedy	See page
Electric motor fails to start or switches off frequently	Faulty power supply cable	Have the cable examined by a specialist	See [→ 16]
	Fuses keep tripping - incorrectly rated fuse for power supply cable	Use correctly-rated fuses	
	Motor circuit breaker tripped	Use stronger power supply cable	
	Direction of rotation wrong	Swap over two phases	
Electric motor fails to start	Limit switch not closed, incorrectly adjusted or defective	Close, adjust or change limit switch	
Switch does not work	Faulty power supply cable	Have the cable examined by a specialist	See [→ 16]
	Fuses keep tripping - incorrectly rated fuse for power supply cable	Have the cable examined by a specialist	
	Contactor or motor circuit breaker faulty	Have switch checked or send it in	
Pusher does not extend	Switch elements jammed	Check switch elements	
	Not enough hydraulic oil in hydraulic system	Change hydraulic oil	See [→ 27]
Pusher does not extend	PTO shaft rotates in wrong direction	Change PTO shaft rotation direction	See [→ 17]
Hydraulic oil getting too hot	Not enough hydraulic oil in hydraulic system	Check hydraulic oil level	See [→ 24]
	Poor quality hydraulic oil	Change hydraulic oil	See [→ 27]
	Oil filter unclean or blocked	Change filter insert	See [→ 28]
Machine loses power	Hydraulic oil getting too hot	See "Hydraulic oil getting too hot"	
	Not enough hydraulic oil in hydraulic system	Change hydraulic oil	See [→ 27]
Sawing requires great amount of power	Saw blade is blunt	Sharpening the saw blade	See [→ 30]
	Loose saw blade	Tighten the hexagon nut on the drive shaft	See [→ 29]
	Saw disc is coated in resin	Clean saw blade with a resin removing agent	
Machine is noisy	PTO shaft running too fast	Adhere to specified speed	See [→ 17]
Machine is noisy	Oil filter unclean or blocked	Change filter insert	See [→ 28]

Feed belt jerks or does not move	Not enough hydraulic oil in hydraulic system	Check hydraulic oil level	See [→ 24]
	Poor quality hydraulic oil	Change hydraulic oil	See [→ 27]
	Conveyor belt too slack	Tensioning the belt	See [→ 35]
Hydraulic cylinder leaking	Sealing sleeve worn	Renew sealing sleeves	
	Piston rod guide loose	Retighten piston rod guide	
	Piston rod damaged	Renew piston rod	
Conveyor belt jerks or does not move	Not enough hydraulic oil in hydraulic system	Check hydraulic oil level	See [→ 24]
	Poor quality hydraulic oil	Change hydraulic oil	See [→ 27]
Conveyor belt jerks or does not move	Conveyor belt too slack	Tension the belt	See [→ 39]

14 Technical data

Type		Z	ZE15
Drive			
Drive type		PTO shaft	PTO shaft/electric motor
Power	kW	20	20 / 15
Voltage	V	-	400
Fuse	A	-	32
Motor speed	rpm	-	1450
PTO speed	rpm	480	480
Hydraulic system			
Splitting force	t	12	12
Max. pressure	bar	230	230
Max. log length	cm	50	50
Max. log diameter	cm	35	35
Forward speed	cm/s	39	39
Return speed	cm/s	35	35
Saw blade			
saw blade diameter	mm	900	900
Cut diameter	cm	35	35
Dimensions *			
Length	cm	370	370
Width	cm	190	190
Height	cm	160	160
Weight	kg	1180	1260

*.....The stated dimensions and weights are for guidance purposes and apply to the basic equipment.

15 Service

POSCH product

To order spare parts for your machine please contact your local dealer directly.

EC Declaration of Conformity

We hereby declare that the following machine, its design and manufacture, comply with the health and safety requirements of the EC Machinery Directive 2006/42/EC.

The machine furthermore complies with the EC Low Voltage Directive 2006/95/EC and the EC Electromagnetic Compatibility (EMC) Directive 89/336/EEC.

This Declaration is not valid for any modifications to the machine which are not approved by us.

Cut-splitter - Spaltfix S-350

Item no.:	M3855 , M3875
Serial no.:	from 1001001A

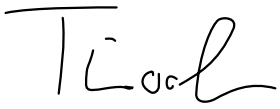
To implement the health and safety requirements mentioned in the EC Directives, the following standards are applied:

- EN ISO 12100-1/-2 General design principles
- EN 4254-1 Agricultural machinery, general requirements
- EN 13857 Safety distances to prevent danger zones from being reached by the upper and lower limbs
- EN 349 Minimum gaps to avoid crushing of parts of the human body
- EN 60204-1 Electrical equipment of machines
- EN 1870-6 Circular sawing machines
- EN 847-1 Safety requirements - circular saw blades
- EN 609-1 Safety of log splitters
- EN 982 Safety requirements - Hydraulics
- EN 620 Continuous handling equipment and systems

Internal measures ensure that this series of devices always complies with the requirements of the EC Directives and the applied standards.

Below is the name and address of the person who signs the above EC Declaration of Conformity and is authorised to compile the technical documentation.

Leibnitz, date:
05.02.2010



Ing. Johann Tinnacher
Managing Director

CE

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